

Survey Guidelines to Determine Presence/Absence of the Light-footed Ridgway's Rail (*Rallus obsoletus levipes*) (formerly Light-footed Clapper Rail) in Southern California

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Survey Guidelines to Determine Presence/Absence of the Light-footed Clapper Rail in Southern California; Recommendations of the Clapper Rail Study Team (John Konecny, Richard Zembal, Susan Hoffman)

The light-footed clapper rail (*Rallus longirostris levipes*) is one of three sub species of clapper rail that occurs in California. The light-footed clapper rail has occurred historically along the coast of southern California from Carpinteria Marsh in Santa Barbara County south to San Quintín, Baja California, Mexico (Grinnell and Miller 1944, USFWS 1984). It is a permanent resident of southern coastal salt marsh traversed by tidal sloughs, usually characterized by cordgrass (*Spartina foliosa*) and pickleweed (*Salicornia* spp.) (Grinnell and Miller 1944, USFWS 1994); and has also occurred in coastal freshwater marsh characterized by cattails (*Typha* sp.) and bulrush (*Scirpus* sp.) at Buena Vista, Agua Hedionda, Batiquitos, San Elijo, Los Penasquitos, and San Dieguito Lagoons in San Diego County; and in spiny rush (*Juncus acutus*) at Naval Air Station (NAS) Point Mugu. Light-footed clapper rails have been recorded up to twenty miles (26 kilometers) inland in freshwater marsh at Whittier Narrows in Los Angeles County, and on the upper San Diego River and Guajome Lake in San Diego County.

Populations of light-footed clapper rails have undergone declines in the United States due to the rail's limited distribution and destruction and degradation of coastal salt marsh habitat. The statewide breeding rail population in 2007 was reported to be 443 pairs in 19 marshes (Zembal *et al* 2007); the largest since the statewide census began in 1980. However, 70 percent of these pairs were found in only two coastal salt marsh complexes at Upper Newport Bay in Orange County and the Tijuana Marsh National Wildlife Refuge in southern San Diego County.

Zembal and Massey (1987) have shown that paired light-footed clapper rails can be detected "clapping" throughout the year, but have a bimodal peak in vocalizations from late-February to mid-May and again in a post-breeding peak from September to November. The initial peak in vocalizing corresponds to the onset of the breeding season. In contrast to "clapping", single male and female "keking" is highly seasonal, almost exclusively occurring between February and June.

All emergent marshes, i.e. southern coastal salt marsh, coastal brackish saltmarsh, coastal freshwater marsh, inland freshwater marsh, and freshwater marsh embedded in woodlands within 20 miles (34 kilometers) of the coast that have had a historical occurrence of the light-footed clapper rail, or documented occurrences since range-wide surveys were initiated in 1980 should be considered to be occupied habitat. For activities that may have a direct or indirect impact on rails or their habitat, the following survey protocol shall be used to determine if an area is occupied by the light-footed clapper rail.

1) Based on one study, three or more surveys are needed to establish marshbird presence in a wetland with 90% certainty (Gibbs and Melvin 1993). Eddlemann and Conway (1998) and Conway (2008 pers.comm.) suggest a 40% detection rate to call prompting. Based on a detection probability of 0.4, six survey passes are required to achieve a confidence level of 0.95. Because of the secretive, endangered status, and low detectability of the light-footed clapper rail, six surveys shall be conducted in all appropriate emergent marsh habitats.

2) The surveys shall be conducted by a biologist that has a section 10(a) 1(a) Fish and Wildlife Service permit (permit), and a California Department of Fish and Game Memorandum of Understanding (MOU). The Clapper Rail Study Team recommends that individuals wishing to apply for such a permit and MOU have at least forty hours of supervised in the field experience in occupied light-footed clapper rail habitat, and in the presence of rails; have a well documented

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knowledge of the most common light-footed clapper rail vocalizations that include but are not limited to the “duet”, “kek”, “agitated kek”, and “kek-burr”; and have a well documented knowledge of similar sounding species such as the Virginia rail (*Rallus limicola*) and least bittern (*Ixobrychus exilis*).

3) At least one survey shall be conducted at dusk, and one at dawn. The remaining four surveys can be conducted at either dusk or dawn. Dawn surveys should begin at or just before sunrise and proceed for no more than three hours after sunrise. Dusk surveys begin two hours before sunset and continue until dark. Surveys shall be conducted with a minimum of seven days between surveys.

4) No more than 20 hectare (50 acres) of emergent marsh habitat shall be surveyed by one biologist per each dawn or dusk survey.

5) Surveys shall be conducted from the edge of potential habitat, and the surveyor shall stay out of the habitat as much as possible to avoid disturbing clapper rails and other nesting species, such as the Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*).

6) Surveys may be conducted between February 15th and April 30th as long as the environmental parameters of 7) and 8) described below apply. Surveys conducted outside this time frame with negative results may not be accepted.

7) Surveys shall only be conducted on warm mornings and evenings (greater than 50° Fahrenheit (10° Celsius). Active calling appears to be triggered by the first warm spell in the spring. Cold and rainy conditions should be avoided. Surveys shall not be conducted when wind speed exceeds 15 miles per hour, or when there is heavy fog.

8) The surveys shall be conducted by stopping at stations approximately 300 feet (100 meters) apart along the perimeter of the survey area and listening for vocalizing light-footed clapper rails for five minutes. If rails are not detected passively, a call-prompt or digital vocalization of the light-footed clapper rail “dueting” shall be played with a digital player and amplified speakers for duration of twenty seconds or the complete length of a clapper rail song. A response shall be listened for a period of one minute. If there is no response, this procedure is repeated two more times (for a total of three) before proceeding to the next survey station. If a clapper rail call is detected, call prompting is immediately stopped, and the surveyor moves at least 600 feet (200 meters) to the next station.

9) The location of all rails detected should be marked on a field map, along with the path the surveyor walked. The map should include the date, name of the project, name of the wetland, name of the surveyor, start and stop times, weather conditions including date of last rainfall, and time spent surveying. The map should be signed by the observer.

References

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